

DOCKET NO.: NNI-0002
Application No.: 10/657,296
Office Action Dated: June 16, 2005

PATENT

Amendments to the Drawings

The attached sheets of drawings includes changes to Figs. 1, 2, 2A, 3-18, 19-21, 22A, 22B, 23 and 24. The sheets, which includes Figs. 1, 2, 2A, 3-18, 19-21, 22A, 22B, 23 and 24 replaces the original sheets including Figs. 1, 2, 2A, 3-18, 19-21, 22A, 22B, 23 and 24 .

Attachment: 26 Replacement Sheets

REMARKS

Entry of this response and reconsideration and allowance of the above-identified patent application are respectfully requested. Claims 1-67 were rejected in the office action. Claims 24, 27, 28, 33 and 34 have been amended. No claims have been canceled or added. Therefore, following entry of the present response, claims 1-67 will remain pending in the present application.

Applicants submit 26 sheets of formal drawings for Figures 1, 2, 2A, 3-18, 19-21, 22A, 22B, 23 and 24. The Examiner is respectfully requested to acknowledge receipt and acceptance of these drawings as formal.

Claims 1-67 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-70 of co-pending Application No. 10/729,243.

A Terminal Disclaimer is being submitted herewith disclaiming the terminal part of the statutory term of any patent granted on the instant application that would extend beyond the expiration date of the full statutory term, as shortened by any terminal disclaimer, of now-pending U.S. Patent Application No. 10/729,243. Therefore, the obviousness-type double patenting rejection has been obviated, and applicants respectfully request withdrawal thereof.

Claims 1-67 also are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-72 of co-pending Application No. 10/792,994.

A Terminal Disclaimer is being submitted herewith disclaiming the terminal part of the statutory term of any patent granted on the instant application that would extend beyond the expiration date of the full statutory term, as shortened by any terminal disclaimer, of now-

pending U.S. Patent Application No. 10/792,994. Therefore, the obviousness-type double patenting rejection has been obviated, and applicants respectfully request withdrawal thereof.

Claims 24-67 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the office action suggests that while claim 24 recites “the magnetic stimulation device,” there is insufficient antecedent basis for this feature because it is not “a positively claimed element.” (*Office Action dated June 16, 2005 at p. 3*).

Applicants have amended claim 24 in accordance with the suggestion by the Examiner. Accordingly, applicants respectfully request withdrawal of the rejection of claims 24-67 under 35 U.S.C. § 112, second paragraph. Applicants also would like to note that contrary to the suggestion in the office action, the conductor may operate by itself on a field created by a magnetic device. Accordingly, applicants reserve the right to pursue such argument and corresponding claim scope in a subsequent continuing patent application.

Also, the office action has rejected claims 27, 28, 33 and 34 under 35 U.S.C. § 112, second paragraph, because “the detection device” lacks proper antecedent basis in that the detection device is not recited until claim 26. Claims 27, 28, 33 and 34 have been amended to overcome the rejection by making those claims dependent upon claim 26. Accordingly, applicants respectfully request withdrawal of the rejection of claims 27, 28, 33 and 34 under 35 U.S.C. § 112, second paragraph.

Claims 24, 25, 35, 36, 42, 44, 46, 53, 54 and 57-59 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,066,084 to Edrich *et al.* (“Edrich”). In particular, the office action contends that Edrich “discloses a device for providing magnetic

stimulation to the body (horizontal coil 11) and what is considered to be ‘at least one conductor’ (vertical coil 12) that reduces the stimulation near the surface that is induced by the magnetic stimulation device.” (*Office Action dated June 16, 2005 at p. 4*).

The claimed embodiments are directed to a system for reducing discomfort caused by a stimulation device in a patient. The novel system includes a stimulation device and a conductor that is peripheral to the stimulation device. The conductor is capable of reducing the discomfort in the patient caused by surface-proximate stimulation that is created by the stimulation device. In other words, the system is configured to reduce stimulation that creates discomfort in a patient by using a conductor to reduce the surface-proximate stimulation. It should be appreciated that this feature is not contemplated by Edrich.

While Edrich admits reducing certain fields, it does so not for the purpose of reducing discomfort in a patient. In particular, Edrich is directed to using two field-creating devices in such a way as to focus their fields to provide a peak. Edrich teaches the use of a “circular coil,” a “figure-of-eight coil,” or a “slinky coil” to create a first magnetic field. Edrich also teaches the use of a second coil to create a second magnetic field to offset the first magnetic field.

However, Edrich does not contemplate creating such fields for the purpose of reducing discomfort in a patient. Instead, Edrich reduces fields in certain locations to increase the fields in another target location in order to obtain “a resultant induced electric field which forms a peak value at a desired tissue depth while at the same time the induced field in the near field region, (e.g. at or slightly below the tissue surface) is minimized out because of mutually opposing fields.” (*Edrich* – Column 4, lines 37-44). In other words,

Edrich reduces the field in one location in order to more efficiently focus the field at another certain desirable target location.

As a result, Edrich's technique allows it to "stimulate excitable tissues at much deeper subcutaneous depths without over stimulating the shallower regions." (*Edrich* – Column 4, lines 47-51). Also, this allows Edrich to "detect nerve current sources at much deeper subcutaneous depths without the added, unwanted noise contributions from shallower regions." (*Edrich* – Column 4, lines 55-59). This deeper stimulation provided by the increased focality, permits Edrich to provide to patients "a more intensified stimulation in deeper tissue regions often required by users for neurophysiological experiments or for clinical applications." (*Edrich* – Column 4, lines 60-64).

However, there is no teaching in Edrich to suggest that such focality reduces discomfort caused by surface stimulation. Instead, the field strengths and structures that are created by Edrich's two coil focusing arrangement are wholly different than the fields that are created for the purposes of reducing discomfort in a patient. In fact, it is likely that Edrich's increased focality technique will redistribute the fields in such a way as to cause greater discomfort for a patient over its entire area.

Accordingly, applicants respectfully request withdrawal of the rejection of claims 24, 25, 35, 36, 42, 44, 46, 53, 54 and 57-59 under 35 U.S.C. § 102 (b) over Edrich.

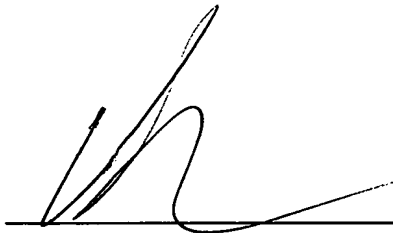
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CONCLUSION

In view of the foregoing, applicant respectfully submits that the claims are allowable and that the present application is in condition for allowance. Reconsideration of the application and an early Notice of Allowance are respectfully requested. In the event that the Examiner cannot allow the present application for any reason, the Examiner is encouraged to contact the undersigned attorney, Vincent J. Roccia at (215) 564-8946, to discuss resolution of any remaining issues.

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